

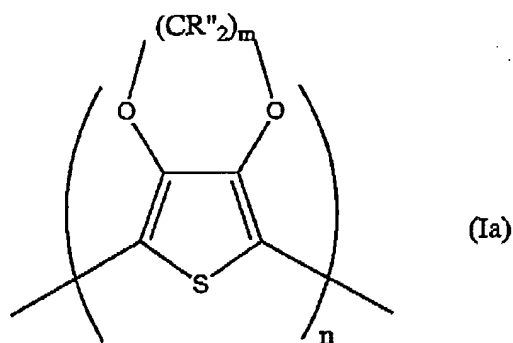
Case No. UC0362USNA
Application No. 10/802,704

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Listing of Claims

JAN 12 2007

1. (Currently Amended) An electrically conductive ~~hole transport or hole injection~~ composition having pH in the range of from 2 to 8 comprising an aqueous dispersion of at least one polythiophene and at least one colloid-forming polymeric acid, wherein said polythiophene comprises the Formula I(a) or Formula I(b):

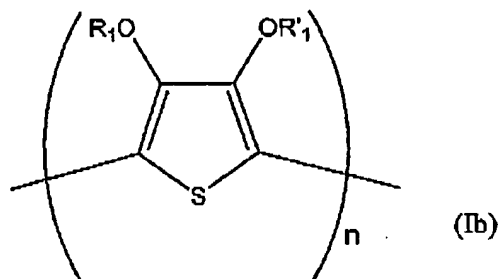


wherein:

R'' is the same or different at each occurrence and is selected from the group consisting of hydrogen, alkyl, heteroalkyl, alkenyl, heteroalkenyl, alcohol, amidosulfonate, benzyl, carboxylate, ether, ether carboxylate, ether sulfonate, sulfonate, and urethane, with the proviso that at least one R'' is not hydrogen,

m is 2 or 3, and

n is at least about 4; or



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wherein:

R'_1 and R_1 are independently selected from the group consisting of hydrogen and alkyl, or

R'_1 and R_1 taken together form an alkylene chain having 1 to 4 carbon atoms, which may optionally be substituted by alkyl or aromatic groups having 1 to 12 carbon atoms, or a 1,2- cyclohexylene radical, and

n is at least about 4.

2. (Previously Presented) A composition according to Claim 1, wherein said colloid-forming polymeric acid comprises an acid selected from the group consisting of a polymeric sulfonic acids, polymeric phosphoric acids, polymeric phosphonic acids, polymeric carboxylic acids, polymeric acrylic acids, and mixtures thereof.

3. (Previously Presented) A composition according to Claim 2, wherein said colloid-forming polymeric acid comprises a fluorinated polymeric sulfonic acid.

4. (Original) A composition according to Claim 3, wherein said polymeric sulfonic acid is perfluorinated.

5. (Previously Presented) A composition according to Claim 1, further comprising at least one additional material selected from polymers, colloid-forming polymeric acids, dyes, carbon nanotubes, metal nanowires, metal nanoparticles, carbon nanoparticles, carbon fibers, carbon particles, graphite fibers, graphite particles, coating aids, organic conductive inks, organic conductive pastes, inorganic conductive inks, inorganic conductive pastes, charge transport materials, semiconductive inorganic oxide nano-particles, insulating inorganic oxide nano-particles, piezoelectric nano-particles, pyroelectric nano-particles, ferroelectric oxide nano-particles, piezoelectric polymers, pyroelectric polymers, ferroelectric oxide polymers, photoconductive oxide nanoparticles, photoconductive oxide polymers, dispersing agents, crosslinking agents, and combinations thereof.

6. (Original) A composition according to Claim 1, further comprising at least one co-dispersing liquid.

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7. (Previously Presented) A composition according to Claim 6, wherein the co-dispersing liquid is selected from the group consisting of ethers, cyclic ethers, alcohols, alcohol ethers, ketones, nitriles, sulfides, sulfoxides, amides, amines, carboxylic acids, and combinations thereof.

8. (Previously Presented) A composition according to Claim 6, wherein the co-dispersing liquid is at least one liquid selected from the group consisting of n-propanol, isopropanol, methanol, butanol, 1-methoxy-2-propanol, dimethylacetamide, n-methyl pyrrozone, 1,4-dioxane, tetrahydrofuran, tetrahydropyran, 4 methyl-1,3-dioxane, 4-phenyl-1,3-dioxane, 1,3-dioxolane, 2-methyl-1,3-dioxolane, 1,3-dioxane, 2,5-dimethoxytetrahydrofuran, 2,5-dimethoxy-2,5-dihydrofuran, 1-methylpyrrolidine, 1-methyl-2-pyrrolidinone, dimethylsulfoxide, and combinations thereof.

9 -28. (Withdrawn)